

BBNA Tribal Energy Efficiency & Conservation Block Grant Program

Administered by Alaska Building Science Network

Manokotak Final Report



Community Summary

One (1) community building owned by the Manokotak Village Council received energy efficient weatherization and heating upgrades:

Village Council Office

Retrofits Completed: August 2012

Village-Wide Energy Efficient Weatherization and Heating Retrofit Summary:

Total Building Savings All Measures:

• Projected Annual Electrical Savings (kWh):	1,079
• Projected Annual Electrical Cost Savings:	\$329 ¹
• Projected Annual Fuel Savings (gallons):	918
• Projected Annual Heating Fuel Cost Savings:	\$5,480 ²
• Total Projected Annual Energy Cost Savings:	\$5,809
• Total village wide In-kind contribution:	\$11,830
• Total project cost including In-kind contributions:	\$53,928
• Simple Payback (including In-kind contributions):	9.28 years

¹ kWh Rate [used to calculate electrical cost savings] for Weatherization & Heating Measures (AkWarm Library): \$0.31

² #2 Heating Fuel Rate [used to calculate heating fuel savings] (AkWarm Library): \$5.97/gal

Village Council Office

Weatherization/Heating Retrofit Summary:



Materials Installed

Installed 2" foam board under exposed floor and air sealed penetrations
 Installed vapor barrier on crawl space floor and attached to skirting
 Air sealed entire building to reduce air leakage
 Installed attic insulation baffles and froth pack insulation on attic ceiling
 Installed 25 bags of blow-in fiberglass insulation in attic
 Insulated and sealed attic hatch
 Installed gable vents and covers
 Installed two laser Toyo stoves
 Install Hardie backer as a firebreak on existing Toyo stove

• Pre-retrofit energy use:	1,379 gallons / 1,498 kWh
• Post-retrofit energy:	461 gallons / 419 kWh
• Annual energy savings projection:	918 gallons / 1,079 kWh
• Pre-retrofit to post retrofit energy reduction:	67% (Fuel) / 72% (Electricity)
• Estimated Annual Heating Fuel Cost Savings:	\$5,480.46
• Estimated Annual Electrical Cost Savings:	\$329.20